

PATTERN MASK WITH FEATURES TO
MINIMIZE THE EFFECT OF ABERRATIONS

Abstract of the Disclosure

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[0039] A semiconductor pattern mask that might
5 otherwise exhibit three-fold symmetry, which could give
rise to distorted semiconductor features in the
presence of three-leaf aberration in the optical system
used to expose a semiconductor wafer through the mask,
is altered to break up the three-fold symmetry without
10 altering the semiconductor features that are formed.
This accomplished by adding features to the mask that
break up the symmetry. One way of achieving that
result is to make the added features of "sub-
resolution" size that do not produce features on the
15 exposed wafer. Another way of achieving that result is
to change existing features that do form structures in
such a way (e.g., with optical elements) that changes
the relative phase, amplitude or other characteristic
of light transmitted through those features.